Tobeo Tsetsa60

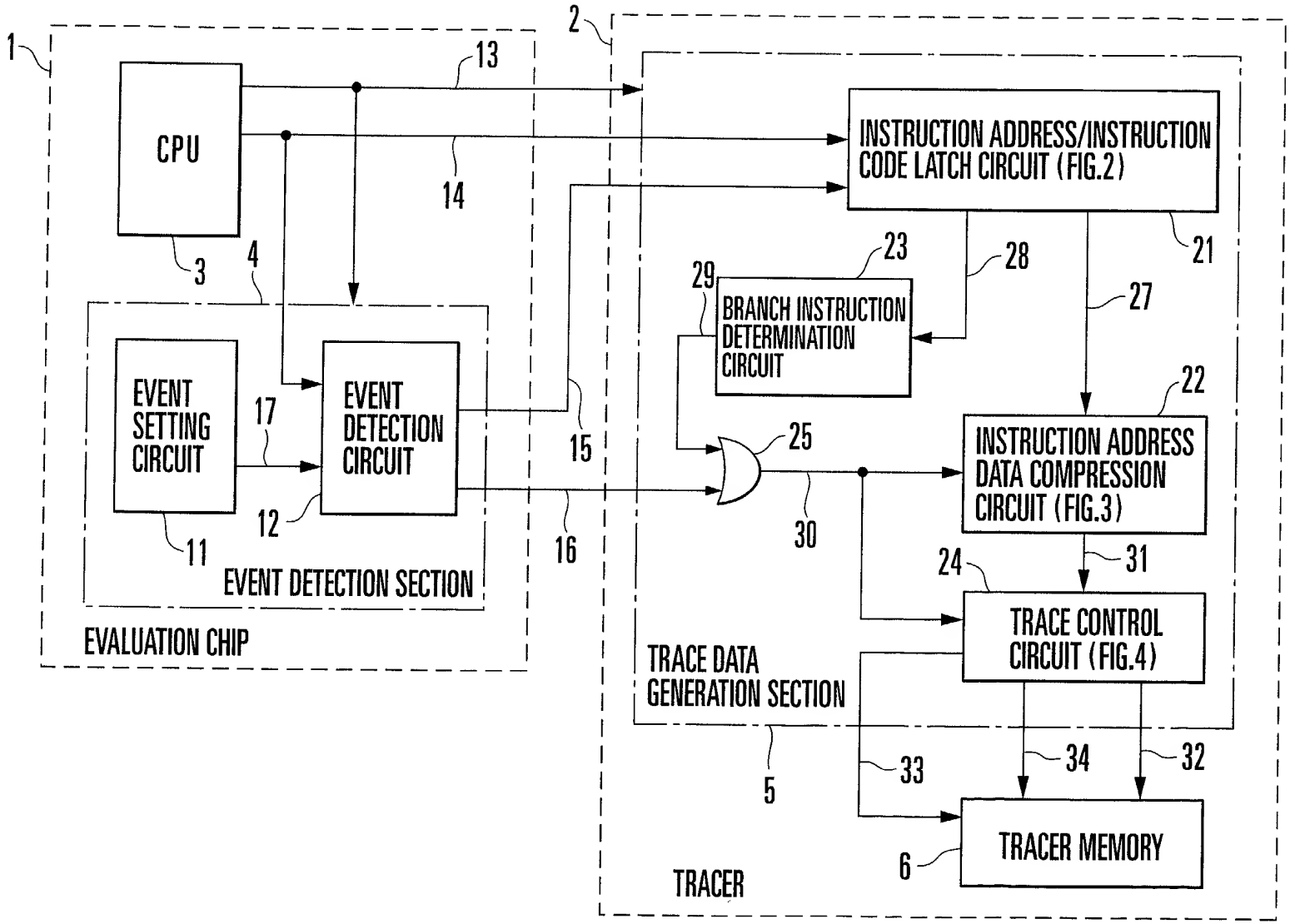


FIG. 1

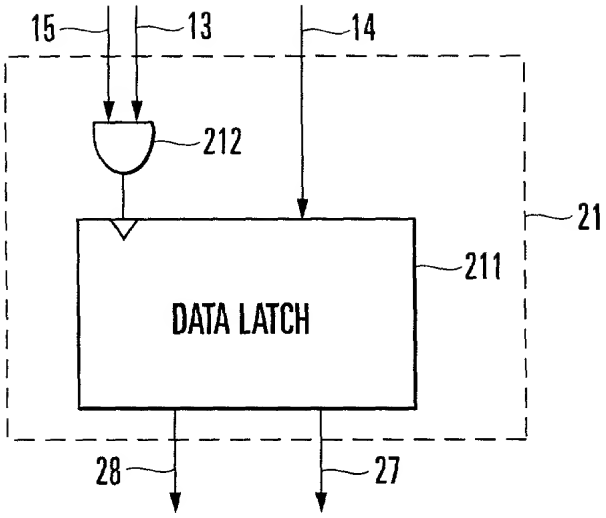

15
13
14
212
21
211
DATA LATCH
28
27

FIG. 2

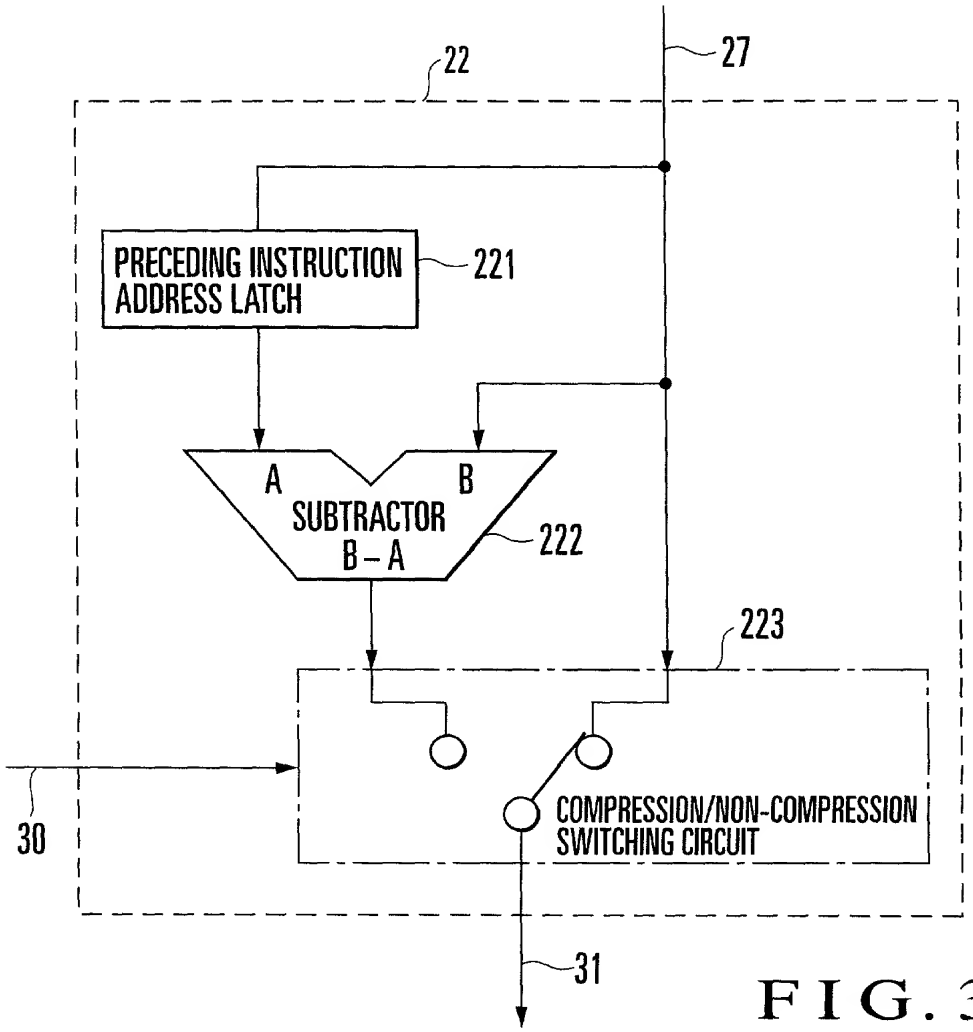

22
27
PRECEDING INSTRUCTION ADDRESS LATCH
221
A
B
SUBTRACTOR
B – A
222
223
30
COMPRESSION/NON-COMPRESSION SWITCHING CIRCUIT
31

FIG. 3

T0820" T5267860

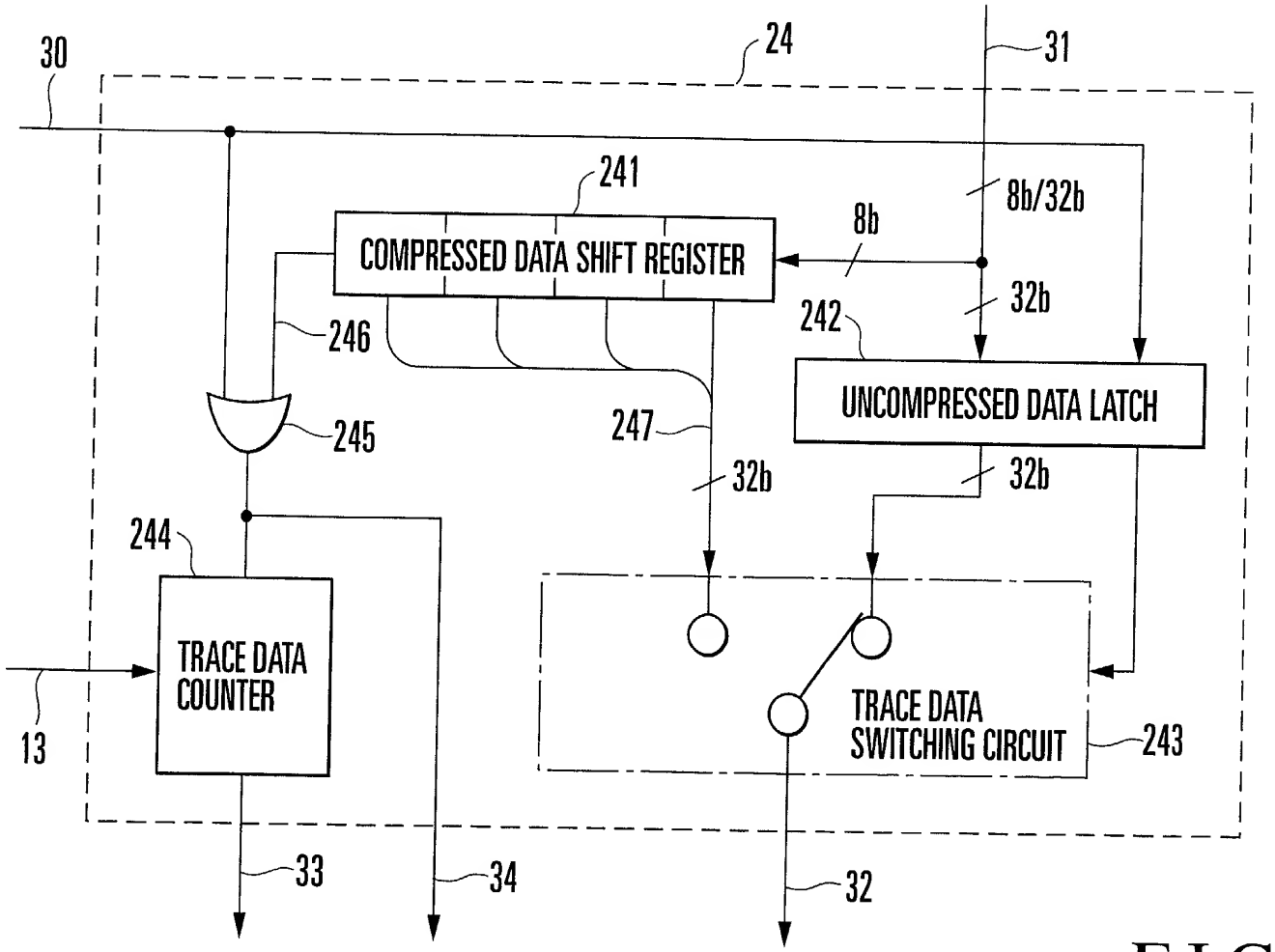
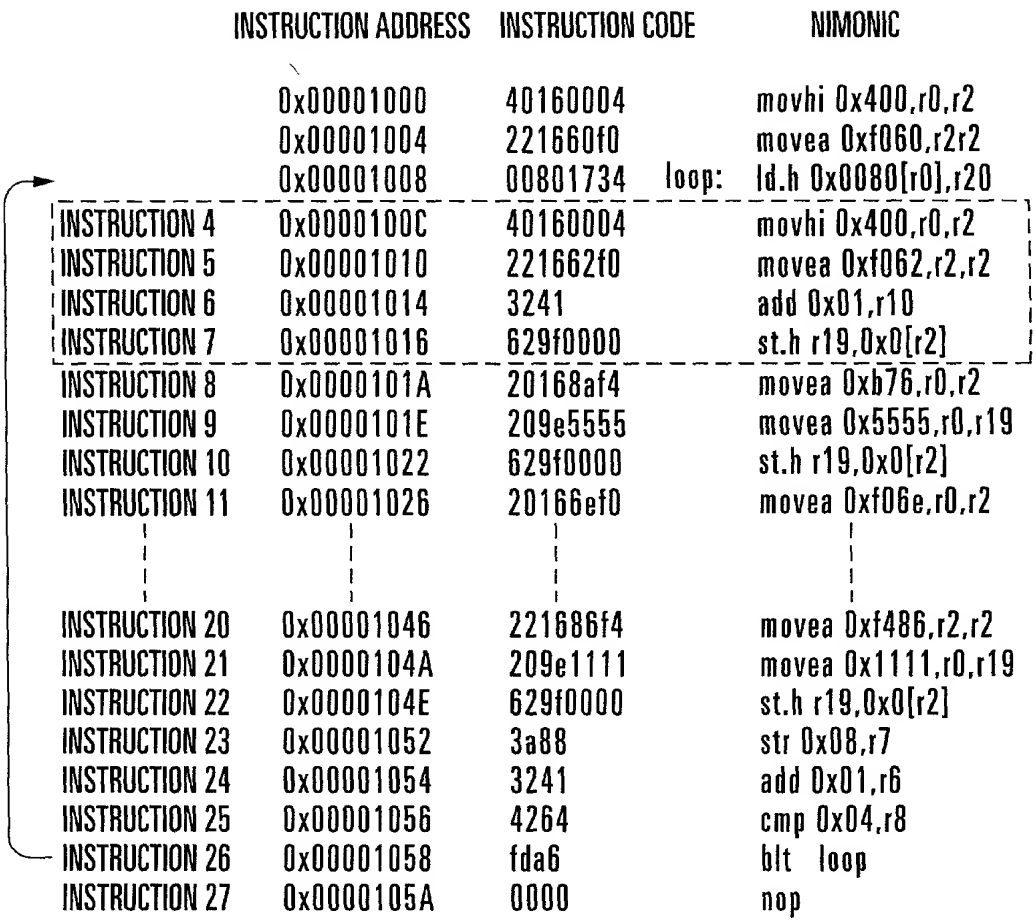


FIG. 4



	INSTRUCTION ADDRESS	INSTRUCTION CODE		NIMONIC
	0x00001000	40160004		movhi 0x400,r0,r2
	0x00001004	221660f0		movea 0xf060,r2r2
	0x00001008	00801734	loop:	ld.h 0x0080[r0],r20
INSTRUCTION 4	0x0000100C	40160004		movhi 0x400,r0,r2
INSTRUCTION 5	0x00001010	221662f0		movea 0xf062,r2,r2
INSTRUCTION 6	0x00001014	3241		add 0x01,r10
INSTRUCTION 7	0x00001016	629f0000		st.h r19,0x0[r2]
INSTRUCTION 8	0x0000101A	20168af4		movea 0xb76,r0,r2
INSTRUCTION 9	0x0000101E	209e5555		movea 0x5555,r0,r19
INSTRUCTION 10	0x00001022	629f0000		st.h r19,0x0[r2]
INSTRUCTION 11	0x00001026	20166ef0		movea 0xf06e,r0,r2
INSTRUCTION 20	0x00001046	221686f4		movea 0xf486,r2,r2
INSTRUCTION 21	0x0000104A	209e1111		movea 0x1111,r0,r19
INSTRUCTION 22	0x0000104E	629f0000		st.h r19,0x0[r2]
INSTRUCTION 23	0x00001052	3a88		str 0x08,r7
INSTRUCTION 24	0x00001054	3241		add 0x01,r6
INSTRUCTION 25	0x00001056	4264		cmp 0x04,r8
INSTRUCTION 26	0x00001058	fda6		blt loop
INSTRUCTION 27	0x0000105A	0000		nop

FIG. 5

FIG. 6A

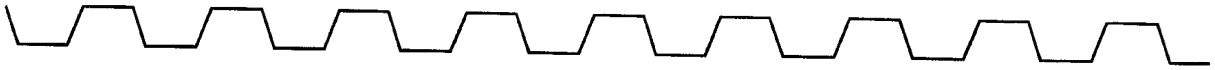


FIG. 6B

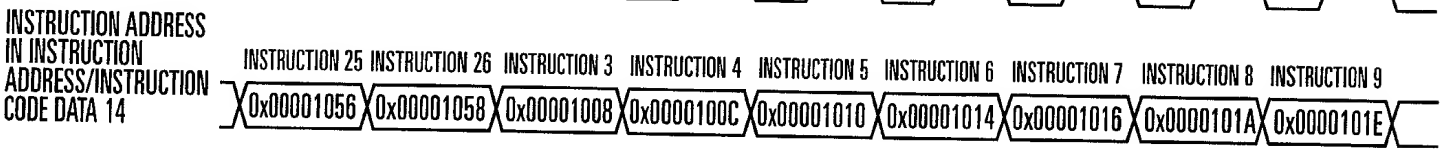


FIG. 6C

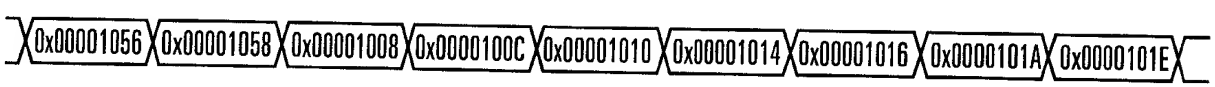


FIG. 6D

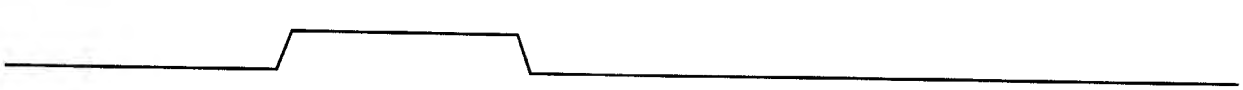


FIG. 6E

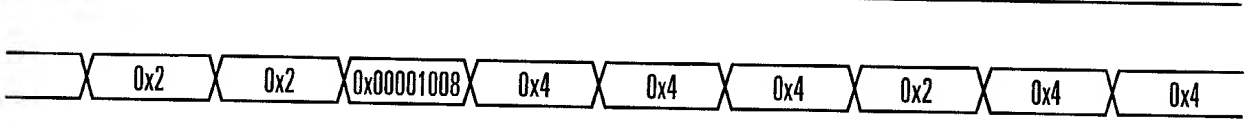


FIG. 6F

FIG. 6G

FIG. 6H

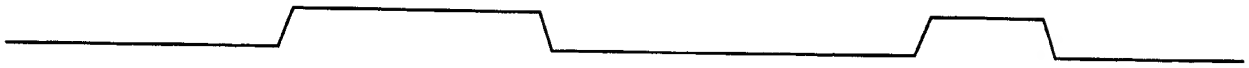
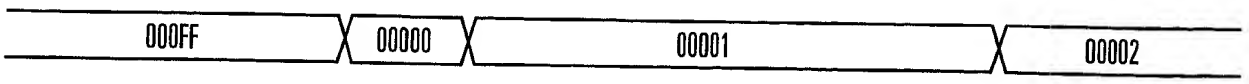


FIG. 6I



Document: 1-1-2-3-4-5-6-7-8-9-10

	TRACE MEMORY ADDRESS	COMPRESSION FLAG	DATA IN TRACE MEMORY	RECONSTRUCTED ADDRESS
INSTRUCTION 3	00000	0	0x00001008	0X00001008
INSTRUCTION 4	00001	1	0x4	0X0000100C
INSTRUCTION 5	00001	1	0x4	0X00001010
INSTRUCTION 6	00001	1	0x4	0X00001014
INSTRUCTION 7	00001	1	0x2	0X00001016
INSTRUCTION 8	00002	1	0x4	0X0000101A
INSTRUCTION 24	00006	1	0x2	0X00001054
INSTRUCTION 25	00006	1	0x2	0X00001056
INSTRUCTION 26	00006	1	0x2	0X00001058
INSTRUCTION 3	00007	0	0x00001008	0X00001008
INSTRUCTION 4	00008	1	0x4	0X0000100C

FIG. 7

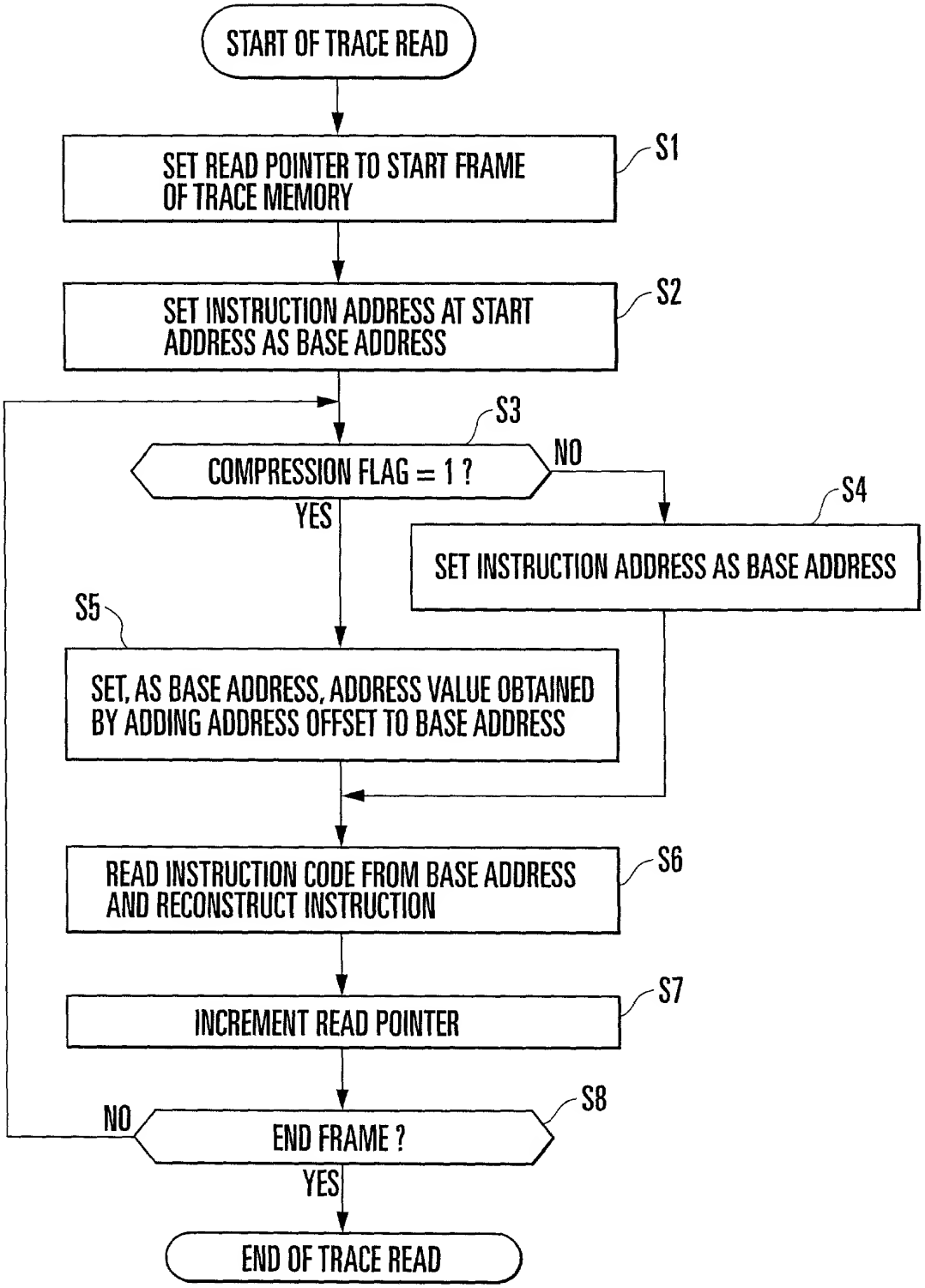

START OF TRACE READ
SET READ POINTER TO START FRAME OF TRACE MEMORY
S1
SET INSTRUCTION ADDRESS AT START ADDRESS AS BASE ADDRESS
S2
S3
COMPRESSION FLAG = 1 ?
NO
YES
S4
SET INSTRUCTION ADDRESS AS BASE ADDRESS
S5
SET, AS BASE ADDRESS, ADDRESS VALUE OBTAINED BY ADDING ADDRESS OFFSET TO BASE ADDRESS
READ INSTRUCTION CODE FROM BASE ADDRESS AND RECONSTRUCT INSTRUCTION
S6
INCREMENT READ POINTER
S7
S8
NO
END FRAME ?
YES
END OF TRACE READ

FIG. 8

TOSZED TSZGTBOO

FIG. 9A

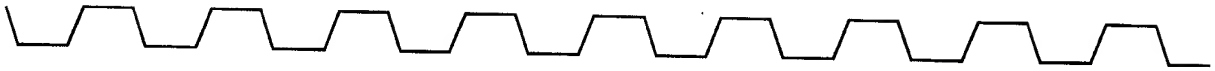


FIG. 9B

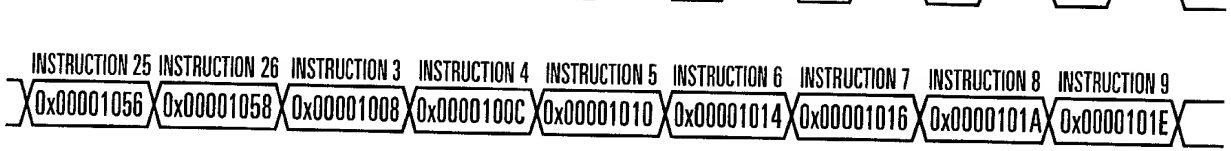


FIG. 9C

FIG. 9D

FIG. 9E

FIG. 9F

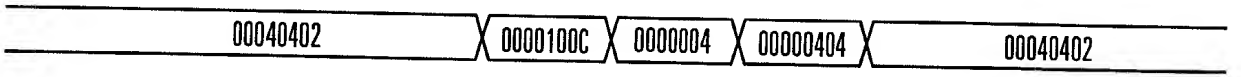


FIG. 9G

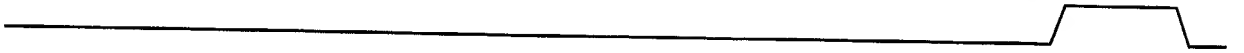
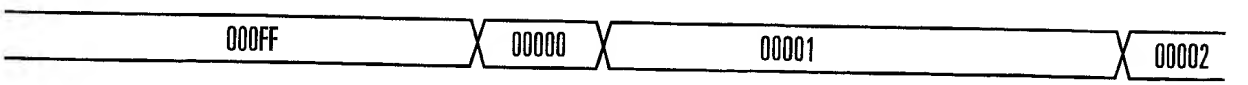


FIG. 9H

FIG. 9I



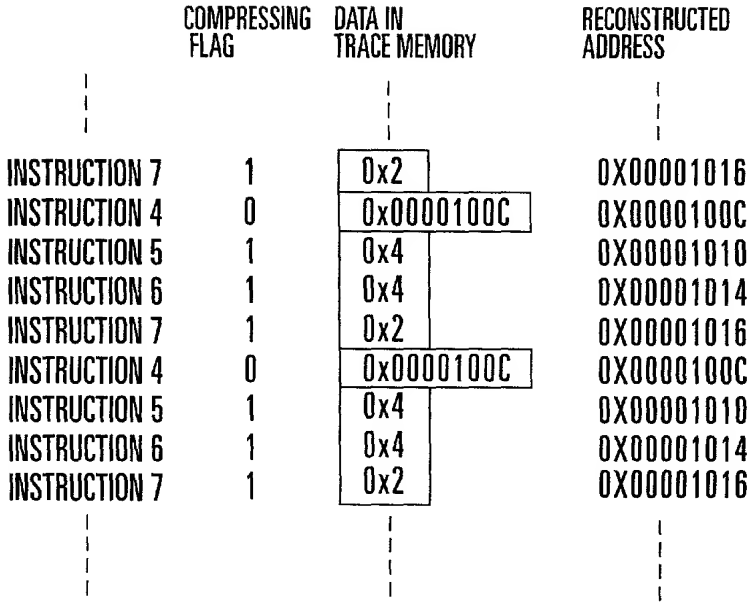

COMPRESSING FLAG
DATA IN TRACE MEMORY
RECONSTRUCTED ADDRESS
INSTRUCTION 7
INSTRUCTION 4
INSTRUCTION 5
INSTRUCTION 6
INSTRUCTION 7
INSTRUCTION 4
INSTRUCTION 5
INSTRUCTION 6
INSTRUCTION 7
1
0
1
1
1
0
1
1
1
0x2
0x0000100C
0x4
0x4
0x2
0x0000100C
0x4
0x4
0x2
0X00001016
0X0000100C
0X00001010
0X00001014
0X00001016
0X0000100C
0X00001010
0X00001014
0X00001016

FIG. 10

TOSCED-T5E6T860

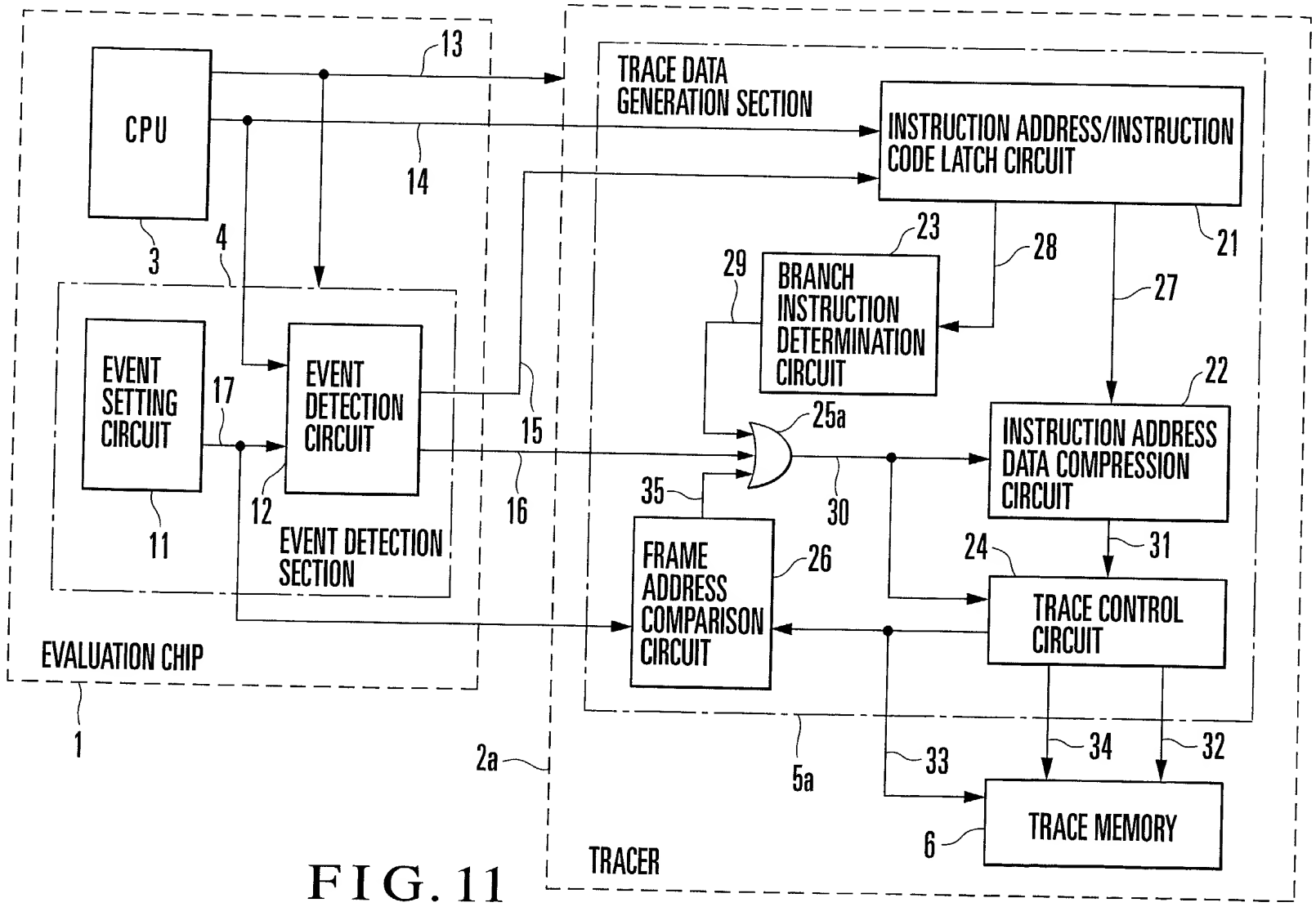


FIG. 11

TOSZED TSZGTBGO

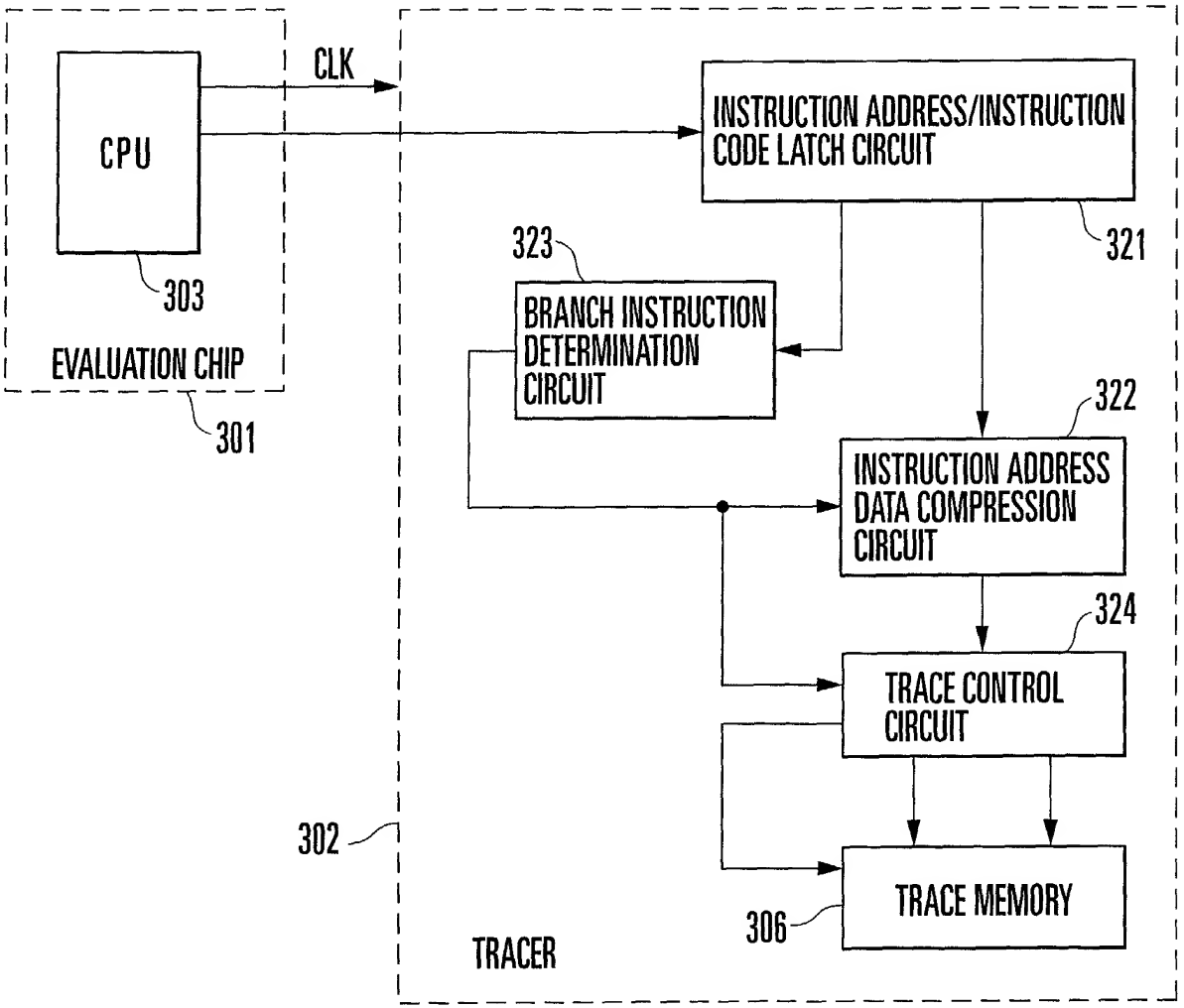


FIG. 12
PRIOR ART